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Michael B. Day

Mary Nichols, Chairman
California Air Resources Board
1001 I Street
Sacramento, Calif. 95814

RE: Comments on Climate Change Draft Scoping Plan

Dear Chairwoman Nichols and Members of the California Air Resources Board:

On the journey to a low-carbon economy, the release of the Climate Change Draft Scoping Plan ("Draft Scoping Plan") by California Air Resources Board ("ARB") is a milestone event. The Draft Scoping Plan is the result of consistent and concerted effort by the Board, ARB staff, other public agencies, and interested stakeholders in developing a path towards a sustainable future. The Solar Alliance and the Vote Solar Initiative (hereinafter Joint Solar Parties) appreciate the opportunity to submit these comments on the Draft Scoping Plan and look forward to assisting in the development of the final Plan in the coming months.

The transition to a low-carbon economy was recognized by the Legislature as essential to maintaining the economic well-being, public health, natural resources and environment in California Legislature with the passage of AB 32.¹ A critical element in that transition is maintaining and stimulating the development and use of zero-carbon, renewable energy technologies such as solar PV. Our comments below seek to ensure that solar is able to be fully utilized as a solution under AB 32.

The Solar Alliance is a state-focused association of solar photovoltaic ("PV") manufacturers, installers, integrators, and financiers dedicated to accelerating the development of solar electric power in the United States.² Our members have a strong commitment to assisting

¹ See Assembly Bill (AB) 32, the Global Warming Solutions Act of 2006 (Nuñez, Chapter 488, Statutes of 2006), Section 2, Findings and Declarations.

² Current members of the Solar Alliance include American Solar Electric, Applied Materials, Borrego Solar, BP Solar, Conergy, Dow-Corning, Energy Innovations, Evergreen Solar, First Solar, Kyocera, Mitsubishi Electric, MMA Renewable Ventures, Oerlikon Solar, PPM Energy, REC Solar, Sanyo, Schott Solar, Sharp Solar, SolarCity, Solaria, Solar Power Partners, SolarWorld, SPG Solar, SunEdison, SunPower, Suntech, Tioga Solar, Trinity Solar, Uni-Solar

(footnote continued)

in the adoption and implementation of far-reaching policies and programs that will accelerate movement towards a low-carbon economy. The Vote Solar Initiative is a non-profit, grassroots organization that works to build the economies of scale necessary to bring solar into the mainstream. Vote Solar has over 7,000 members in California, and 50,000 members nationwide.³

Guiding Principles

Supporting the Voluntary Green Power Market - At the onset of our discussion of the Draft Scoping Plan, the Joint Solar Parties believe it is important to recognize a few fundamental principles. First, measures adopted pursuant to AB 32 should do no harm to current green power efforts taking place within California. Corporations, local governments, non-profits and individuals are currently able purchase renewable power outside of utility offerings to reduce their contribution of GHG emissions either through the purchase Renewable Energy Credits (RECs), separate from the electricity delivered by the utility or through ownership of on-site PV systems. Indeed, as explained by the Renewable Energy Marketers Association in recent comments on greenhouse gas regulation filed with the California Public Utilities Commission:

“The market for green power (renewable electricity and RECs sold independently of electricity) is strong and growing. In 2005, U.S. consumers made voluntary purchases of renewable energy totaling about 8.5 million MWh, and 2006 purchases are estimated to total about 12 million MWh. The voluntary market grew by 62% in 2004, 37% in 2005, and 40% in 2006. Currently, the voluntary market represents nearly one-fifth of the overall renewable energy demand from both compliance and voluntary markets on a MWh-basis. If the voluntary market continues to grow at a rate of 35% annually, it will reach about 40 million MWh by 2010 and represent about one-quarter of the total U.S. demand from voluntary and compliance markets.”⁴

As California decision-makers contemplate the design of measures to achieve greenhouses gas (“GHG”) reductions beyond these voluntary actions, they should not disrupt the existing GHG reduction activity already in place. Instead, AB 32 compliance efforts should build on this momentum to further develop renewable power, consistent with long-standing California policy directives, and encourage accelerated GHG emission reductions by all sectors of society.

Supporting Citizen Participation - Second, and a corollary to the first, government efforts to transition California to a sustainable future should work in tandem with voluntary efforts, further these efforts, and propel them to their full impact. The Draft Scoping

and Xantrex.

³ Vote Solar has given counsel for the Solar Alliance permission to sign these comments on their behalf.

⁴ See Comments of Renewable Energy Marketers Association to the California Public Utilities Commission and the California Energy Commission, filed at the California Public Utilities Commission, June 2, 2008, at pp. 3-4.

Plan appears to implicitly recognize this principle when it states, “[t]he pollutant reductions required under AB 32 cannot be realized without the active participation of the people of California.”⁵ The related discussion in Section IV.A of the Draft Scoping Plan addresses how individuals can be agents of change and, in fact, recognizes that all Californians must be involved in the transition to a low-carbon economy to make AB 32 a success. AB 32 also recognized both of these principles by requiring identification of verifiable and enforceable voluntary actions and by requiring recognition of early action during the development of the Scoping Plan and after implementation of the Plan.⁶ The Joint Solar Parties fully agrees with ARB’s recognition of that all Californians must participate in pollution reduction for AB 32 to be successful. Thus potential emissions reduction measures under AB 32 should seek to increase, not hinder, citizen participation in our clean energy future.

Joint Solar Parties Comments

The Draft Scoping Plan identifies recommended greenhouse gas reduction measures for various sectors of the California economy.⁷ In addition to direct regulation to achieve emission reductions, the Draft Scoping Plan also identifies capped sectors – transportation, electricity, commercial/residential, and industry – that will be required to participate in a Cap-and-Trade program to achieve additional emissions reductions beyond the recommended measures discussed.⁸ Precise Cap-and-Trade program elements such as setting the cap level and determining the method for distributing allowances are set for development in the future.⁹ The Draft Scoping Plan also identifies electric sector emission reduction strategies that maximize energy efficiency in buildings, appliances and other contexts, achieve a 33% Renewables Portfolio Standard (“RPS”) by investor-owned and publicly-owned utilities, and promote customer investments in PV under the Million Solar Roofs Program.¹⁰

The Joint Solar Parties generally support ARB’s identification of these strategies as recommended emission reduction measures. However, careful consideration must be given to how each of these strategies participates in meeting AB 32 goals in order to ensure no harm is done to ever-increasing voluntary efforts to achieve GHG reductions. To this end, the Solar Alliance offers the following comments:

⁵ Draft Plan at p. 65.

⁶ See Cal. Health & Safety Code Secs. 38561(f), 38562(b)(1) and (2).

⁷ See, e.g., Draft Plan at p. 11.

⁸ See Draft Plan at pp. 15-20.

⁹ See Draft Plan at pp. 19.

¹⁰ See Draft Plan at pp. 21-25, 30-31 respectively.

A. Adoption an Output-based Allocation Scheme That Grants Allowances to New Renewable Generation is Necessary to Ensure New Renewable Generation is Able to Participate Fully in Helping Meet AB 32 GHG Reduction Goals.

While the ultimate design of a cap-and-trade program is left to future deliberations, the Joint Solar Parties believe a discussion of certain fundamental aspects of cap-and-trade program design must be discussed now to ensure that California can maximize GHG reductions from renewable energy generation. We recommend an output-based allocation scheme that grants allowances to new renewable energy generators. The Western Climate Initiative (“WCI”), which ARB intends to coordinate with, allows a portion of each state or provinces’ allowance budget to be used to support renewable energy.¹¹ For the reasons discussed below, California should support and adopt this approach and provide a specific allowance allocation to new renewable energy purchases within an output-based approach.

As discussed above, efforts by individuals, businesses, religious organizations, and other entities are driving sales of renewable energy. These efforts are driving significant amounts of new renewable generation above that required by RPS compliance markets. Accordingly, care must be taken to ensure that the GHG allocation scheme chosen by ARB does not disrupt these efforts. Instead, AB 32 GHG compliance efforts should build on this momentum to further develop renewable power, consistent with long-standing California policy directives, and encourage accelerated GHG emission reductions by all sectors of society.

There are many possible allocation methodologies for allowances to capped sectors under a cap-and-trade program. Consistent with the requirements of AB 32, the California Public Utilities Commission (“CPUC”) and the California Energy Commission (“CEC”) are working jointly to consider various issues relating to GHG emissions within the electric and natural gas sectors of California. As part of these deliberations, CPUC and CEC staff jointly released a Staff Paper, entitled Joint California Public Utilities Commission and California Energy Commission Staff Paper on Options for Allocation of GHG Allowances in the Electric Sector, on April 16, 2008 (“Staff Paper”). The Staff Paper discusses possible allocation methodologies for allowances within the electric sector. Among the methodologies considered within the Staff Paper are output-based allocation methodologies which would essentially provide allowances to “each eligible unit of power delivered to the grid...at some rate per MWh such that the sum of allowances allocated equals the cap.”¹² MWhs would be determined by deliveries to the grid in the prior year.¹³ Deliverers of energy with emission rates above the allowance allocation rate would have to secure additional allowances to cover their excess

¹¹ See Section 8.2 of Western Climate Initiative, Draft Design of the Regional Cap-and-Trade Program, July 23, 2008.

¹² Staff Paper at p. 24.

¹³ Id. at p. 25.

emissions.¹⁴ Deliverers with emission rates below the allocation rate would have excess allowances for trade within the cap-and-trade framework.¹⁵ A fundamental question in an output-based allocation methodology is whether MWhs produced by renewable generation should be included within the allocation.

An output-based allocation methodology in which cap-and-trade program administrators allocate allowances to new renewable generation directly is essential to ensuring that new renewable generation is able to participate fully in helping meet AB 32's GHG reduction goals because it ensures that carbon-intensive first deliverers do not obtain a "free ride" on the GHG reductions resulting from private investment in renewable generation. Free ridership by carbon-intensive first deliverers would occur under an allocation scheme in which only carbon-intensive generators are eligible to receive allowances because no direct reduction in allowances will result from the MWhs actually delivered to the grid by new renewable generation. As explained below, such an outcome retards the desire to invest in these technologies which are a fundamental solution to climate change while simultaneously allowing carbon-intensive generation to continue.

Without an allowance allocation to new renewable power, a portion of the cost of compliance from the carbon-intensive generator is shifted to the customer who invests in renewable generation. This is because the compliance market does not recognize emission reductions from the addition of new renewable generation, even though renewables actually deliver low- or zero-carbon MWhs to the grid.¹⁶ This outcome lowers the value of allowances within the cap-and-trade system which results in emitting entities avoiding reducing their carbon emissions in the near term and being allowed to continue to operate high GHG emitting generation longer than they otherwise would have been able to if the renewable generation was properly recognized for the MWhs actually delivered.¹⁷ This outcome is contrary to the intent of AB 32. If the cap is not tightened to account for delivery of MWhs to the grid from investments in new renewable generation, carbon emitting generation could also increase their emissions under the cap.¹⁸ This free ridership by carbon intensive generators on the GHG reduction value of new renewable generation is a direct result of new renewable generation not having its carbon reduction value recognized based on the MWhs actually delivered to the grid by renewables.

These problems cannot be overcome simply by directing additional public funding toward renewables. Unless renewable generation purchased outside the RPS reduces the

¹⁴ See Id. at pp. 25-26.

¹⁵ Id.

¹⁶ See Id.

¹⁷ See Id. at pp. 28-29 (noting increased incentives for deliveries of natural gas-fired deliveries and decreasing the cost of compliance for coal-fired generation, see also Figure 5).

¹⁸ See Staff Paper at pp. 28 and 30 (noting the price of gas-fired generation declining under an output-based allocation methodology which excludes renewables).

cap via the retirement of an allowance, new zero-emission generation will not result in real, verifiable GHG emission reduction, and therefore, cannot support a customer market sector for carbon-free power. Without the ability to make that claim, renewable generation will be restricted to utility and LSE procurement under the RPS and the growing customer market for renewable purchases will collapse. Because the goal of many state policies, including the Million Solar Roofs Program, is to transition renewable power into the energy resource mainstream, AB 32 programs should be designed in a way which supports these efforts and moves them forward. Allocation of allowances to renewables would do so by countering the competitive disadvantage faced by renewables and ensuring renewable generation is able to make the carbon reduction claims which are the primary motivator for private investment in renewable generation.¹⁹

Allocation of allowances to new renewable generation is also necessary to allow non-electric sector entities with GHG compliance obligations to use renewable generation to meet those obligations. The flexibility to allow capped sectors to seek out the most cost-effective solutions to meet their compliance obligations is at the heart of a multi-sector cap and trade program. However, the rationale underpinning the desire to institute a multi-sector cap and trade program – the ability to seek out cost-effective means of reducing carbon emissions through a wide variety of measures in a liquid allowance market – does not just flow from the electric sector to other capped sectors. Rather, allocating allowances to new renewable generation will enable other sectors to use renewable generation as a cost-effective means of meeting their GHG compliance obligations. A multi-sector cap and trade program needs to be liquid and flexible in order to allow cost-effective solutions for GHG reductions to present themselves. This liquidity and flexibility should not be undermined at the onset by preventing new renewable generation from receiving allowances.

If allowances are auctioned, a portion of allowances could be set aside for new renewable generation according to an output-based allocation approach. This set-aside portion could be adjusted over time to account for changes in the rate of new renewable generation development. Instead of requiring carbon-intensive industries to pay an Administrator for GHG allowances under an auction-only system, an output-based new renewable set aside within the auction would create an opportunity for these same carbon-intensive industries to purchase allowances directly from new renewable generation owners, thereby leveraging carbon capital directly to finance new renewable projects, expanding the renewable power market, and driving down renewable power costs to benefit the economy as a whole. Wisconsin and Pennsylvania, for example, have proposed output-based allocations, including allocating allowances to renewable generation, as part of their Clean Air Interstate Rules.

To address equity concerns, a portion of the funds obtained via an auction could be earmarked to provide additional PV incentives to low income residents in high temperature areas such as the Central Valley or Southern California to help these customers install PV to

¹⁹ Id. at p. 30.

meet their increasing air-conditioning needs resulting from global warming. This would help address the needs of the elderly and infirm, who are expected to be the most impacted by higher temperatures caused by global warming.

B. To Encourage Continued Customer Investment in Solar Energy Systems and the Associated Emission Reductions of those Systems, Allowances Under AB 32 Cap-and-Trade Program Should be Allocated to Citizens Who Choose to put Solar on Their Homes and Businesses.

At the onset of consideration of how the Million Solar Roofs Program and future customer-owned PV purchases should be counted for AB 32 compliance, it must be remembered that programs contained in the Million Solar Roofs Program, such as the California Solar Initiative (“CSI”), are market transformation programs designed to bring solar energy into the energy resource mainstream. For example, the CSI program, administered by the CPUC, does not *require* customers to invest in solar, for while it provides steadily declining incentives as the PV market grows, the customers who voluntarily choose to participate in the program provide the majority of necessary funding to have a solar energy system installed. This investment is growing proportionally over time as ratepayer incentives decline and the CSI is designed to expire once market transformation of the PV industry is achieved. In this sense, the CSI program is not a regulatory command and control program but is instead a voluntary program driven by market forces and individual customers choosing to invest in solar technologies. The CPUC has recognized this aspect of the CSI in many of its decisions.²⁰

The CPUC has already determined that the owners of a solar energy system incentivized by the CSI retain ownership and control of the renewable energy credits (“RECs”) generated by their system, which contain GHG emission reduction attributes. The CPUC made this determination based on three observations: (1) customers desire to invest in a solar energy system was often motivated by their ability to make green energy claims, including GHG reduction claims; (2) sale of RECs could provide an important revenue stream to CSI participants as incentives decline in the future, if they choose not to make a green energy or GHG reduction claim; and (3) sale of RECs could ultimately result in the incentives provided by ratepayers being reduced because CSI participants sell their RECs in voluntary or compliance markets.²¹ Each of these points is equally salient today and supports designing a GHG compliance market under AB 32 that supports customer’s voluntary efforts to reduce their GHG footprint through the Million Solar Roofs Program which includes the CSI.

The CPUC’s first observation is especially germane because, as discussed above, many customers are highly motivated to reduce their carbon footprint and see solar as an

²⁰ See, generally, Decision No. (D.) 06-01-024, D.06-08-028, D.07-01-018 (program design will take account of market conditions and the evolution of the market)

²¹ See D.07-01-018, pp. 15-21.

important tool in doing so. This explosive growth in private investment in renewable energy shows customers are interested in and highly motivated to reduce their carbon footprint using voluntary carbon markets, and that RECs are an important vehicle for doing so.

Now is not the time to inadvertently limit the legitimacy of these efforts by negating the GHG emission reductions from the voluntary purchase of renewable power within California's cap-and-trade design. The appropriate way to count emissions reductions from CSI participants' voluntary efforts to reduce their GHG emissions is through an allocation of allowances to renewable generation incentivized by the CSI under an output-based approach. As discussed above with regard to renewable generation generally, allocation of GHG allowances to CSI participants, the same as other renewable generators, ensures incentives to invest in PV are maintained by ensuring the entity making the investment in the renewable generation has control over the emission reduction claims.

For solar customers who choose not to make GHG reduction claims, allowing CSI customers to sell allowances produced by their solar energy system could provide a valuable and market-oriented revenue stream to offset declines in ratepayer incentives. This transition to a market-funded revenue stream was recognized in D.07-01-018 as "consistent with the long-term goal of transitioning the solar industry away from ratepayer incentives to a self-sustaining model in which no such incentives are necessary."²² The Commission also recognized that "[revenue from REC sales] could supplement and eventually, in combination with other elements of economic value, replace altogether ratepayer incentives as these incentives are phased out."²³ Stated directly, an allowance provides a market incentive that can only be realized if the customer who invests in the emission reduction also owns and controls use of the allowance tied to the reduction.

For these reasons, it is most appropriate to place the CSI program, and subsequent customer-owned PV systems purchased post-CSI, within the cap-and-trade portion of any AB 32 compliance framework by allocating allowances to PV system owners. Within that framework, CSI participants should receive allowances for any energy delivered to the grid the same as other generators. Doing so allows CSI participants, and future cost-competitive PV customers, to maintain their ability to make GHG reduction claims which is an important motivation for many CSI customers. It also maintains an individual's *choice* to monetize the allowance by selling to another buyer wishing to make a voluntary claim by purchasing an allowance, or wishing to meet their emission reduction obligation by purchasing allowances. Each of these outcomes allows AB 32 efforts to work in harmony with the voluntary carbon market and government efforts already underway to bring solar into the energy resource mainstream.

²² D.07-01-018 at pg. 19.

²³ Id.

The Joint Solar Parties are sensitive to concerns regarding double counting and believe policies must be put in place to protect the integrity of the CSI, RPS and AB 32 compliance. To avoid double counting, the Joint Solar Parties believe the Western Renewable Energy Generation Information System ("WREGIS") can be relied upon to verify REC/allowance ownership and retirement.

C. Counting Voluntary Emissions Reduction Efforts for New Renewable Generation as Offsets is Not Appropriate.

The Draft Scoping Plan recognizes both compliance and voluntary offsets as a means for Californians to reduce their GHG emissions. However, "voluntary renewable power" markets that reduce GHG emissions are not synonymous with "voluntary GHG offsets" markets. In fact, quite the opposite is the case since "offsets" are by definition voluntary efforts taken outside of sectors with compliance obligations. Renewable generation, on the other hand, operates within the capped electric sector and produces electricity with low- to zero-carbon emissions that reduce GHG emissions which otherwise would have occurred within that sector. For this fundamental reason, approaching recognition of voluntary emissions reduction efforts achieved through investment in new renewable generation as an offset is inappropriate. Because new renewable generation directly operates as part of a capped sector in the Draft Scoping Plan, it should be dealt with in the mechanism designed for that sector and receive allowances for the reasons discussed above.

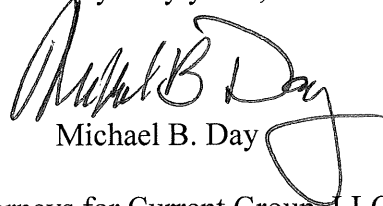
Conclusion

The Joint Solar Parties appreciate the opportunity to provide these comments on the Draft Scoping Plan and looks forward to assisting the ARB with further development of the Scoping Plan and AB 32 measures. Based on the discussion above, the Joint Solar Parties recommend three changes to the Draft Scoping Plan:

1. ARB should adopt an output-based allowance allocation methodology which grants allowances to new renewable generation.
2. Emission reductions resulting from customer investments in PV should be counted within the AB 32 cap-and-trade program so that system owners are assured their investment in renewable generation will result in real emission reductions.
3. Voluntary emission reductions resulting from new renewable generation should not be treated as voluntary or compliance "offsets" from outside the capped sector; instead they should be treated as emission reductions within the capped electric sector.

Mary Nichols, Chairman
August 1, 2008
Page 10

Very truly yours,



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